

ABSTRACT

This invention is directed to a process for etching a semiconductor device using an etchant composition to form a predetermined etched pattern therein. The semiconductor device typically has a plurality of layers. At least one of the layers comprises a refractory metal, refractory metal alloy or refractory metal silicide. The etchant composition contains a high concentration of chlorine. The source (or TCP) power is decreased over that of conventional methods, and the bias (or RF) power is increased. Using such an etchant composition, along with the adjusted power levels, uniform etching and increased oxide selectivity is achieved.